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ABSTRACT

The Eastern Iowa Community College District (EICCD) libraries received a federal College Library Technology and Cooperation grant to provide and link public access catalogs at each college of the district--Clinton Community College, Muscatine Community College, and Scott Community College. That network is named Quad-LINC (Quad Cities Libraries in Cooperation). Quad-LINC is located in the Quad Cities area of western Illinois and eastern Iowa. An online computer terminal and a compact disk workstation were acquired for each library. This document is the final performance report of the project. The objectives and activities of the study are identified, and the results of each are given. A list of revisions to the project are listed as well as the impact on users. Three elements compromise the evaluation plan: user satisfaction; level of inter-library loan requests and/or reciprocal borrowing; and improvement in users' ability to identify resources in their "home" libraries. Finally, the future plans of the project and the budget details are presented. The questionnaire to determine user satisfaction is included. (JLB)

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ED 373 781

FINAL PERFORMANCE REPORT

COLLEGE LIBRARY TECHNOLOGY AND COOPERATION GRANTS PROGRAM

HIGHER EDUCATION ACT, TITLE II-D

Submitted By: Eastern Iowa Community College District
306 West River Drive
Davenport, IA 52801-1221

Report Prepared By: Thomas Hanifan (Project Director)
Muscatine Community College
Phone: (319) 263-8250

Cynthia L. Hoogheem
Library Assistant
Clinton Community College

Grant Number: R197A10086

Project and Budget Period: 10/1/91 - 9/30/92

Funds Awarded: $67,909

Funds Spent: $66,823

IR055136

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Since 1979 the Eastern Iowa Community College District (EICCD) libraries have been leaders in the use of technology to access information, thereby strengthening academic programs. College Library Technology and Cooperation Grants Program funds were used to further enhance accessibility to information by providing "public access catalogs" at each college of the District--Clinton Community College, Muscatine Community College, and Scott Community College. An on-line computer terminal and a compact disk workstation were acquired for each library. This technology is intended to accomplish two goals. First, to allow users to search a combined catalog of the book and media holdings of a local resource sharing network. That network is named Quad-LINC (Quad Cities Libraries in Cooperation). Quad-LINC is located in the Quad Cities area of western Illinois and eastern Iowa. Second, to replace the card format catalogs as a means of identifying book and media materials.

OBJECTIVES

The objectives of this project are:

1. **To provide EICCD library users with access to a combined catalog of the holdings of Quad-Linc libraries.**

   Results:
   An on-line "public access catalog" was installed at each library in February of 1992. These are computer terminals which are inter-actively connected to the main Quad-LINC computer by means of telephone lines. The catalog provides up-to-the-minute information regarding the book and media holdings of each Quad-LINC library. It also indicates the loan status of each item owned by member libraries.

   A compact disk "public access catalog" was installed at each library in November of 1991. These are micro-computer work stations which use compact disks to store information regarding the book and media holdings of each Quad-LINC library. They are intended as back-ups to the on-line terminals, since they are updated monthly and do not provide loan status.

   EICCD library users now have access to information regarding 1.5 million items held by 23 academic, public, and specialized libraries representing 59 physical locations. This provides our users with access to a wide variety of resources which is unusual for an academic library. The varied educational priorities of the academic libraries complement each other. The priorities of specialized libraries such as John Deere & Co. offer unique resources. The public libraries offer their generalist role of providing resources for the universe of subject fields and for all age levels.

   "Public access catalogs" also provide a replacement for the card catalog as a tool for locating books and media in libraries. "Public access catalogs" are sophisticated information processing tools. Yet, they are generally easier to learn and use, locate information faster, and identify a higher number of relevant materials than will the traditional card format catalog.

2. **To provide the user with the current loan status of the items they need.**

   Results:
   This capability is included as part of the on-line "public access catalog."

3. **To provide the foundation for access to worldwide information sources.**

Results:
The on-line "public access catalog" provides a platform to create a gateway linking EICCD patrons to regional and national information resources. The members of Quad-LINC continue to seek ways of using the "public access catalogs" as tools to gain access to information services such as indexes to journal articles and to the on-line catalogs of other library systems. The technology to accomplish this is beginning to emerge in the marketplace.

ACTIVITIES

The project consists of six activities.

1. **Acquire and install terminals and compact disk workstations at each of the libraries by June of 1992.**

   Results:
   The installation was completed during February of 1992.

2. **Train all key library personnel to use the new technology by June of 1992.**

   2.1 **Each library director will attend at least one regional CLSI, Inc. user's group meeting or training conference.** CLSI is the vendor which provides the hardware and software which is used by Quad-LINC.

   Result:
   The project director attended the CLSI Midwest User's Group annual meeting in September of 1992 in Lincolnshire, Illinois. It included presentations regarding the future of CLSI, specific aspects of the system, and demonstrations of a forthcoming revision of the software.

   The librarian at Clinton Community College attended a conference in Mason City, Iowa titled "Library/ Media: the future is...". It addressed some of the same issues. The Scott Community College librarian was too ill to attend such sessions.

   2.2 **Key library personnel will attend local training sessions.**

   Results:
   No local training sessions were made available to us by Quad-LINC or by CLSI, Inc. None was needed, since the system is highly user friendly. Staff knowledge was quickly gained through hands-on use.

3. **Develop, implement, or purchase a user education program.**

   Results:
   No in-depth user training was found to be necessary, since the "public access catalogs" are highly user friendly. However, information regarding the nature and use of the "public access catalogs" has been added to normal library orientation activities.

4. **Expand the system by acquiring additional compact disk technology to supplement full-featured terminals.**

Results:
Additional equipment will be acquired as patron queuing verifies the need and as funds permit.

5. **Increase inter-library loan staff.**

Results:
EICCD library staff will be increased as needed to accommodate increased inter-library loan demand, as funds permit.

6. **When the Public Access Catalogs are fully implemented, the libraries will close their card catalogs.**

Results:
The card catalog at each library was closed on July 1, 1992. The card catalogs will remain in each library for the foreseeable future. However, cards for new materials are no longer added to them.

REVISIONS TO THE PROJECT

The Scott Community College librarian, Margaret Broderson, became terminally ill during the last month of the grant.

Because of her illness the grant administrator, Thomas Hanifan, assumed the responsibilities of the Scott Community College librarian. All grant activities at Scott Community College were completed.

A survey was to be conducted prior to the installation of the "public access catalogs." It was intended to determine user satisfaction with the traditional card catalog. However, it was not conducted at the beginning of the project. The compact disk equipment unexpectedly arrived at the beginning of the grant period, before the survey was developed. In addition, the home library of the project director has experienced a 36% increase in circulation during the past two years. Questions relating to user satisfaction with the card format catalog were incorporated into a survey which was conducted at the end of the grant. That survey evaluated user satisfaction with both the card and computer formats of the catalog.

It was originally proposed that the project director travel to the Clinton and Scott libraries to install the equipment. However, this was not necessary since the automation manager of Quad-LINC performed the installation.

The equipment configuration varied from the original proposal. It was necessary to acquire additional compact disk drives to store the current data base, and to allow for future expansion. The data storage requirements were more than the vendor anticipated. Also, two additional libraries joined Quad-LINC.

IMPACT ON USERS

The "public access catalogs" improved access to information for 6019 credit students (fall 1992 enrollment), 54,375 non-credit students (1991/92 academic year), and 844 staff (fall 1992).

Several assumptions regarding the benefits of "public access catalogs" were made when the project was proposed:

It was assumed that the "public access catalogs" would lead to increased circulation of District library materials, since they enhance patron ability to identify resources at each college. Circulation statistics have not yet clearly verified this assumption. Muscatine experienced a 15.7% increase in circulation. But this may have been part of a previously existing pattern of rapid circulation growth. There was only a .5% increase in circulation at Clinton. There was a 5.9% increase in circulation at Scott.

Circulation Transactions

	1990/91	1991/92
Muscatine	12,804	14,818
Clinton	14,337	14,414
Scott	8,786	9,313

It was assumed that the number of items borrowed from other libraries, through inter-library loan, would increase due to patron ability to locate items in other Quad-LINC libraries. This was clearly verified by a 60% increase in the number of inter-library loan items borrowed by EICCD libraries.

Inter-Library Loans Borrowed By EICCD

	1990/91	1991/92
Muscatine	440	645
Clinton	356	683
Scott	304	432

It was assumed that an increased number of EICCD card holders would visit other Quad-LINC libraries to borrow materials that they had identified through the "public access catalogs." However, reciprocal borrowing statistics do not confirm this. There was an 11.9 % over-all decrease in reciprocal-borrowing loans to EICCD card holders. The project director's recent experience at Scott Community College has brought into question the validity of this measure of the impact of the "public access catalog." It may not be possible to track the number of Scott students who borrow from other libraries. Many Scott students do not have Scott library cards, but own cards from other Quad-LINC

libraries. In addition, the distance between the Clinton and Muscatine libraries and other Quad-LINC libraries, few patrons from those EICCD libraries are willing to travel to obtain needed material.

Loans to EICCD Students From Other Libraries

	1990/91	1991/92
Muscatine	201	142
Clinton	149	137
Scott	2,462	2,196

A number of other libraries in Quad-LINC obtained "public access catalogs" at the same time as EICCD. This is probably the cause of a 56.59% increase in the number of requests for inter-library loans received by the Clinton and Muscatine libraries. No 1990/1991 statistics have been located for the Scott library.

Inter-Library Loans Provided to Quad-LINC Libraries

	1990/91	1991/92
Muscatine	430	643
Clinton	199	342
Scott	-0-	457

The fact that other Quad-LINC libraries have recently acquired "public access catalogs" may explain the 5.7% increase in the total number of items loaned to card holders from other libraries. However, the validity of reciprocal borrowing statistics has already been brought into question.

Loans By EICCD Libraries to All Card Holders

	1990/91	1991/92
Muscatine	239	163
Clinton	235	388
Scott	5,011	5,246

EVALUATION

Three elements comprise the evaluation plan

1. User satisfaction

User preference for the "public access catalog" became immediately clear. Two months after the equipment was completely installed, Muscatine conducted a spot check of patrons using the various forms of the catalog. Only 21.87% of all catalog users were using the card format.

By the end of the grant period, user preference had increased as users became more aware of the existence of the "public access catalog" and how to use it. A study conducted between November 30 and Dec. 7, 1992, found that only 5.97% of catalog users were using the card format.

% using on-line catalog	52.23
% using compact disk catalog	41.79
% using card catalog	5.97

A survey (See Attachment A) was conducted from Nov. 30th to Dec. 7th, 1992, to determine user satisfaction with the card format catalog and with the computer format catalog. Users of the catalogs were approached by members of the library staff to request their participation in the survey. 57 users responded. A larger response was desired. But the period chosen for the study was a peak period for the staff and catalog use was lower than normal.

Findings regarding user satisfaction with both formats of the catalog are described below. The relatively small number of responses limits the statistical significance of some of the results. Those that were not significant are identified (by **). The responses represent staff as well as students, unless otherwise noted.

The library staffs could do a better job of educating users about the existence and nature of the "public access catalogs"

- Only 89.5% of the respondents knew that it is a combined catalog of area library holdings. **
- There was clearly a lack of knowledge about the differences between the on-line and the compact disk versions. 80.7% of the users were aware of the nature of the on-line version. But only 33.3% were aware that the compact disk version did not provide loan status and was not up-to-date. **

- 33.3% of the respondents thought that the "public access catalogs" were an index to periodical articles, rather than to books and media. **
- Instructors may be poorly informed. Only 15.8% of the students were directed to the "public access catalogs" by their instructors.
- 28.1% of the students discovered the "public access catalogs" on their own.

User acceptance of the "public access catalogs", as compared to the card format catalog, was high.

- 76.4% felt that the "public access catalogs" were easier to learn.

  -- 64.3% learned how to use the "public access catalogs" without direct assistance from anyone else. They learned either with the assistance of instructions or help messages installed in the software or by using printed instructions prepared by the project director.

  -- The length of time that it took for users to learn how to use the technology was short. 57.9% learned it in less than 5 minutes. 80.7% learned it in less than 10 minutes. 91.2 % learned in under 20 minutes.

- 78.6% felt that they were easier to use.
- 92.9% felt that they identified a greater number of materials for the user.
- 89.1% felt that they allowed users to identify mater-ials faster.
- 80.7% now use them as their primary means of search-ing.
- However, many users still felt more comfortable using the card format catalog--23.6%.

The survey yielded several other findings worth noting.

- Users felt that on-line instructions and help messages would be the most effective method for the libraries to provide instruction in the use of the system (42.1%). They felt that the second most effective method would be one-on-one instruction, either from a library staff member or from a friend (35.1%). Users felt that printed instructions were less effective (17.5%) and that group instruction was the least effective means of providing user instruction (5.3%). **

- Part-time students show a definite lack of knowledge regarding the "public access catalog", when compared to full-time students.

-- 93% of full-time students knew that the catalog included book and media holdings of the member libraries. Only 22.2% of part-time students knew it. **
-- 86% of full-time students were aware that the on-line terminal was up-to-the-minute and that it indicated the circulation status of each item. Only 55.5% of part-time students knew this. **
-- 34.9% of full-time students knew that the compact disc version of the catalog is not up-to-the-minute and does not indicate circulation status. Only 22.2% of part-time students knew this. **
-- 71.43% of full-time students knew that the INFOTRAC computer-based periodical index is not the same thing as the "public access catalog". Only 55.6% of part-time students knew this. **

(** not statistically significant)

2. **Level of inter-library loan requests and/or reciprocal borrowing**

Analysis of inter-library loan requests has been reported earlier in this report.

3. **Improvement in user ability to identify resources in their "home" library**

Analysis of circulation statistics was reported earlier in this report.

PLANS FOR THE FUTURE

The future of library technology within EICCD includes further enhancement of user ability to find information and resources within the District libraries and outside of the walls of the EICCD libraries. Plans include:

- Providing additional "public access catalogs" at each college. The need is especially critical at Scott where the enrollment is approximately 3 times greater than the enrollment of Muscatine and Clinton.

- Providing "public access catalogs" at branch campuses--the Urban Center of Scott Community College and the Maquoketa center of Clinton Community College.

- Utilizing the on-line terminals as gateways to regional and national information sources, as this technology becomes feasible and cost-effective.

- Using fiber optic technology to replace the expensive phone lines linking the libraries with the main Quad-LINC computer.

Recommendations for additional Quad-LINC related improvements will be made to the Dean of the College at Muscatine. They will be communicated from there to the District Instructional Council, and then to the Chancellor's Cabinet for action.

The data obtained from the user satisfaction survey will guide EICCD library development in the future. Similar surveys will be administered in the future to further refine user orientation efforts and to assist Quad-LINC in the future development of the system.

BUDGET SUMMARY

CATEGORY	GRANT FUNDS Proposed	GRANT FUNDS Spent	DISTRICT FUNDS Proposed	DISTRICT FUNDS Spent
*Salary	-0-	-0-	$14,177	$14,177
*Fringe Benefits (25% of Salaries)	-0-	-0-	3,544	3,544
Travel	-0-	-0-	210	210
Equipment	$67,804	$66,718	-0-	-0-
Supplies	105	105	900	900
Contractual Services	-0-	-0-	1,380	1,380
Other	-0-	-0-	1,200	1,200
TOTAL DIRECT COSTS:	**$67,909**	**$66,823**	**$21,411**	**$21,411**
TOTAL INDIRECT COSTS:	**-0-**	**-0-**	**$ 1,630**	**$ 1,630**
TOTALS:	**$67,909**	**$66,823**	**$23,041**	**$23,041**

*Personnel:

Project Director - T. Hanifan (20%)	$ 8,018
Library Director (SCC) - M. Broderson (10%)	3,724
Librarian (CCC) - C. Hoogheen (10%)	2,435
	$14,177

FINANCIAL STATUS REPORT

(Short Form)

(Follow instructions on the back)

1. Federal Agency and Organizational Element to Which Report is Submitted	2. Federal Grant or Other Identifying Number Assigned By Federal Agency	OMB Approval No.	Page	of
U.S. Dept. of Education College Library Technology	R197A10086	0348-0039	1	1 pages

3. Recipient Organization (Name and complete address, including ZIP code)

Eastern Iowa Community College District
306 West River Drive
Davenport, Iowa 52801-1221

4. Employer Identification Number	5. Recipient Account Number or Identifying Number	6. Final Report	7. Basis
42-0924364-A3	278310-03-4490	☒ Yes ☐ No	☒ Cash ☐ Accrual

8. Funding/Grant Period (See instructions) From: (Month, Day, Year)	To: (Month, Day, Year)	9. Period Covered by this Report From: (Month, Day, Year)	To: (Month, Day, Year)
10 1 91	9 30 92	10 1 91	9 30 92

10. Transactions:	I Previously Reported	II This Period	III Cumulative
a. Total outlays	-0-	$89,864	$89,864
b. Recipient share of outlays	-0-	$23,041	$23,041
c. Federal share of outlays	-0-	$66,823	$66,823
d. Total unliquidated obligations			-0-
e. Recipient share of unliquidated obligations			-0-
f. Federal share of unliquidated obligations			-0-
g. Total Federal share (*Sum of lines c and f*)			$66,823
h. Total Federal funds authorized for this funding period			$67,909
i. Unobligated balance of Federal funds (*Line h minus line g*)			$ 1,086

11. Indirect Expense	a. Type of Rate (*Place "X" in appropriate box*) ☐ Provisional ☐ Predetermined ☐ Final ☒ Fixed			
	b. Rate	c. Base	d. Total Amount	e. Federal Share
	9.2%	$17,721	$ 1,630	-0-

12. *Remarks: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation.*

13. Certification: **I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.**

Typed or Printed Name and Title	Telephone (Area code, number and extension)
John T. Blong, Chancellor	(319) 322-5015
Signature of Authorized Certifying Official	**Date Report Submitted**
John T. Blong	12/18/92

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BUDGET DETAIL

The final cost to implement the grant was $1086 less than projected, due to vendor price reductions and to quantity discounts that became available.

Categories	Federal Funds Expended	College Funds Expended
Salary and wages	0	$14,177
Fringe benefits	0	3544
Travel	0	210 prop
Equipment	$66,718	
Supplies	$105	900 prop
Contractual Services	0	1380 prop
Other	0	1200 prop
Total direct costs	$66,823	21,411 prop
Total indirect costs	0	$1,630
TOTALS:	$66,823	23,041 prop

ITEMIZED BUDGET

Category	Federal	Applicant
Salary and wages:		
Project Director (20%)		$8,018
Library Director - SCC (10%)		3,724
Librarian - CCC (10%)		2,435
		$14,177
Total		
Fringe benefits:		
25% of total salaries of $14,177		$3,544
Travel:		
Attendance at CLSI Midwest Users Group annual meeting (project director). CLSI is the vendor of the software and hardware acquired under this grant		220
Attendance at "Library/Media: the future is..." conference (Clinton librarian)		$174
Attendance at monthly Quad-LINC director's meetings and periodic committee meetings by all staff (at 21 cents per mile)		
CCC $18.90 x 15 meetings		$283
MCC $ x 18 meetings		
SCC $ x 9 meetings		

Equipment:

	TELECOMMUNICATIONS			
2	4-channel Micom Box 2 ($6260 each)	$12,520		
1	16-Channel Micom Box 2	$14,880		
	ON-LINE TERMINALS			
3	CL/CAT Support Units ($6375 each)	$19,125		
3	T1200 Terminals ($415 each)	$ 1,245		
3	CL/CAT printers (Diconix printers ($437 each)	$ 1,311		
2	tables for CL/CAT terminals - shipping and handling			$1580 54
	COMPACT DISK WORKSTATIONS			
3	CD/ROM workstations ($3290 each)	$9,870		
3	initial operating software and database mastering for CD/ROM workstations ($595 each)	$1785		
3	additional CD/ROM drives Hitachi CD/ROM drives ($600 each)	$1800	single drives	
3	Pioneer CD/ROM drives ($1200 each)	$3600	6-drive	
3	menu software ($150 each)	$450		
-	shipping and handling	$78		

Supplies:

3	CL/CAT keycaps for terminals ($ 35 each)	105	
-	answer sheets for user surveys		
-	printer paper		$120

Contractual services:

Quad-LINC user fees ($198 per month from Feb. 1992)	$1189
phone line expenses ($688 per month)	$4129

Other:

Purchase and installation computer cables to communicate with Quad-LINC	1200	prop of

CCC $34 MCC SCC		
Installation of electrical circuits MCC CCC $481 SCC		
Computer data base search for articles dealing with user surveys		$50
Total direct costs:		$21,411 prop
Total indirect costs: (9.2% of salaries and fringe benefits totalling $17,721)	0	$ 1,630
Total project costs:		$23,041 prop

EASTERN IOWA COMMUNITY COLLEGE DISTRICT
LIBRARY USER SURVEY

The purpose of this survey is to obtain your reaction to the computer version of the library "Card catalog" -- which is called QUAD-LINC.

Directions: Please use the separate answer sheet to respond to the survey. Use a soft #2 pencil. Select only ONE response for each item. Select a "letter" response for each question (A, B, C, D, or E). Make a heavy black mark that fills the circle of the response you select. Erase cleanly any answer you wish to change. Make no stray marks on the answer sheet.

The information you supply will be kept completely confidential. DO NOT fill in your name, birth date, or identification number.

1. I am a:
   A. full-time student
   B. part-time student
   C. member of the staff/faculty/administration
   D. visitor

2. Age:
   A. 17-22
   B. 23-29
   C. 30-39
   D. 40-49
   E. over 50

3. Sex:
   A. female
   B. male

4. If you are a student, indicate the number of semesters (including this one) you have been enrolled in college.
   A. 1
   B. 2
   C. 3
   D. 4 or more
   E. does not apply

5. How high would you rate your "computer literacy" in general.
   A. high degree of experience programming or using commercially available programs (WordPerfect, Lotus 1-2-3, etc.)
   B. moderate degree of experience programming or using commercially available programs
   C. little experience programming or using commercially available programs
   D. I do not consider myself "computer literate" at all
   E. Computers scare me !!!

6. How often do you use this library?
   A. at least once daily
   B. almost daily
   C. about once a week
   D. 2-3 times a month
   E. almost never

7. Are you aware that Quad-LINC is a combined catalog of the book and media holdings of this library and over 20 other libraries in the Quad Cities area?
   A. Yes
   B. No

8. Are you aware that the Quad-LINC "On-Line" terminal is an up-to-the-minute catalog of the book and media holdings of those libraries and that it also indicates whether an item is checked out?
   A. Yes
   B. No

9. Are you aware that the Quad-LINC compact disc catalog ("Intelligent Catalog") does NOT indicate if an item is checked out and is NOT "up-to-the-minute"?
   A. Yes
   B. No

10. Are you aware that INFOTRAC ("Academic Index") is NOT the same as Quad-LINC and that it indexes periodical articles rather than books and media?
   A. Yes
   B. No

11. How did you first find out that Quad-LINC existed?
   A. from an instructor
   B. from a library staff person
   C. found it on my own
   D. from another library user
   E. from using another library which had it

12. How did you first learn how to use Quad-LINC?
   A. printed instructions at the terminal
   B. instructions and "help" screens provided on the terminal
   C. "one-on-one" instruction from a library staff person
   D. from another library user
   E. formal group instruction or tour

13. How long did it take you to learn enough about Quad-LINC to do your first search?
   A. 0-5 minutes
   B. 6-10 minutes
   C. 11-20 minutes
   D. more
   E. I haven't been able to figure how to search yet

14. How would you rate your current level of expertise using Quad-LINC
    A. expert
    B. have used it a number of times, but need to learn more
    C. have used it a few times, but have much to learn
    D. beginner
    E. have never used it before

15. Which do you feel would be the most effective way for the library to provide instruction on how to use Quad-LINC?
    A. Printed instructions at the terminal
    B. Instructions and "help" screens on the terminal
    C. "One-on-one" instruction from a library staff person
    D. Formal group instruction or tour

16. Which form of the catalog do you feel is the EASIEST AND FASTEST TO LEARN?
    A. card catalog
    B. Quad-LINC

17. Which form of the catalog do you feel is usually the EASIEST TO USE?
    A. card catalog
    B. Quad-LINC

18. Which form of the catalog do you feel usually allows you to FIND THE MOST MATERIAL?
    A. card catalog
    B. Quad-LINC

19. Which form of the catalog do you feel usually allows you to FIND MATERIAL THE FASTEST?
    A. card catalog
    B. Quad-LINC

20. With which form of the catalog do you FEEL THE MOST COMFORTABLE USING?
    A. card catalog
    B. Quad-LINC

21. Before you found out about Quad-LINC, which of the following ways of finding information did you use most frequently?
    A. card catalog
    B. browsing the shelves
    C. asking a library staff member

22. Which do you use most frequently now?
    A. browsing the shelves
    B. Quad-LINC "on-line"
    C. card catalog
    D. Quad-LINC "compact disk"
    E. asking a library staff member